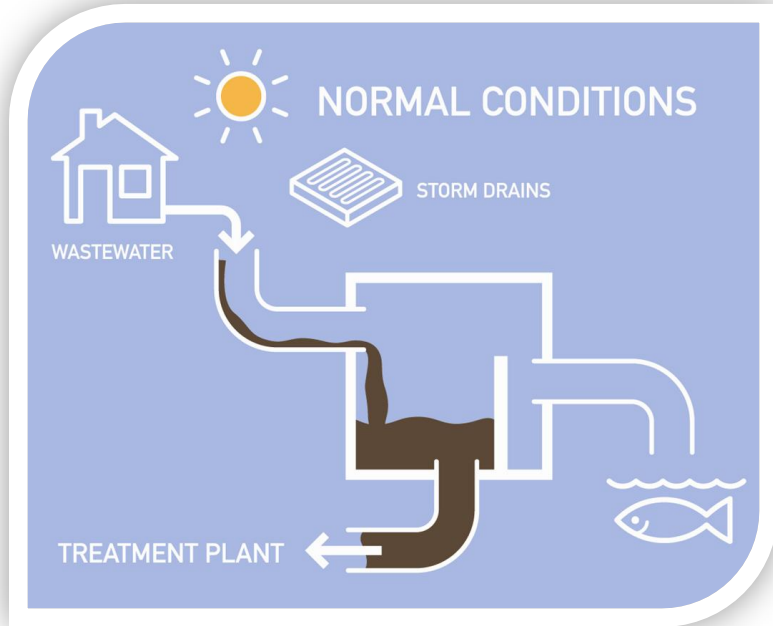


Genesee Area Combined Sewer Overflow Reduction Project

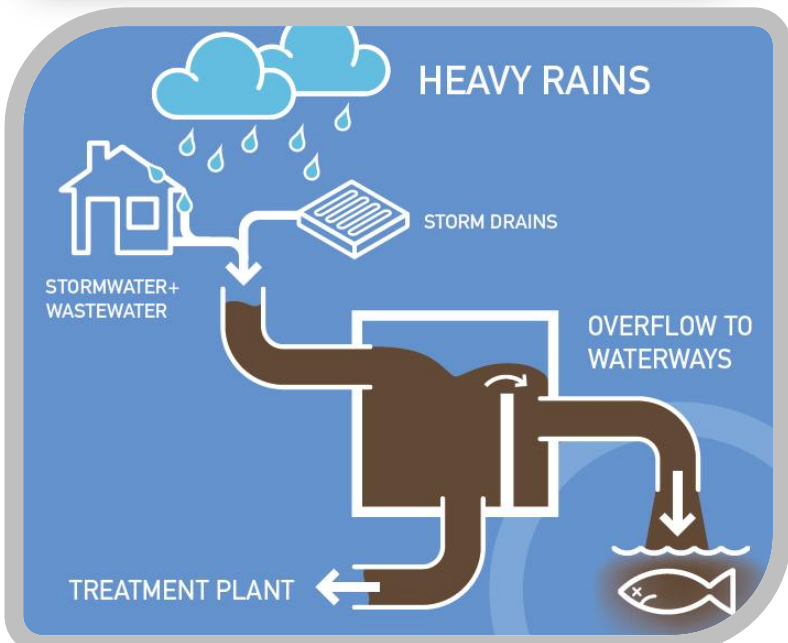


September 21, 2010

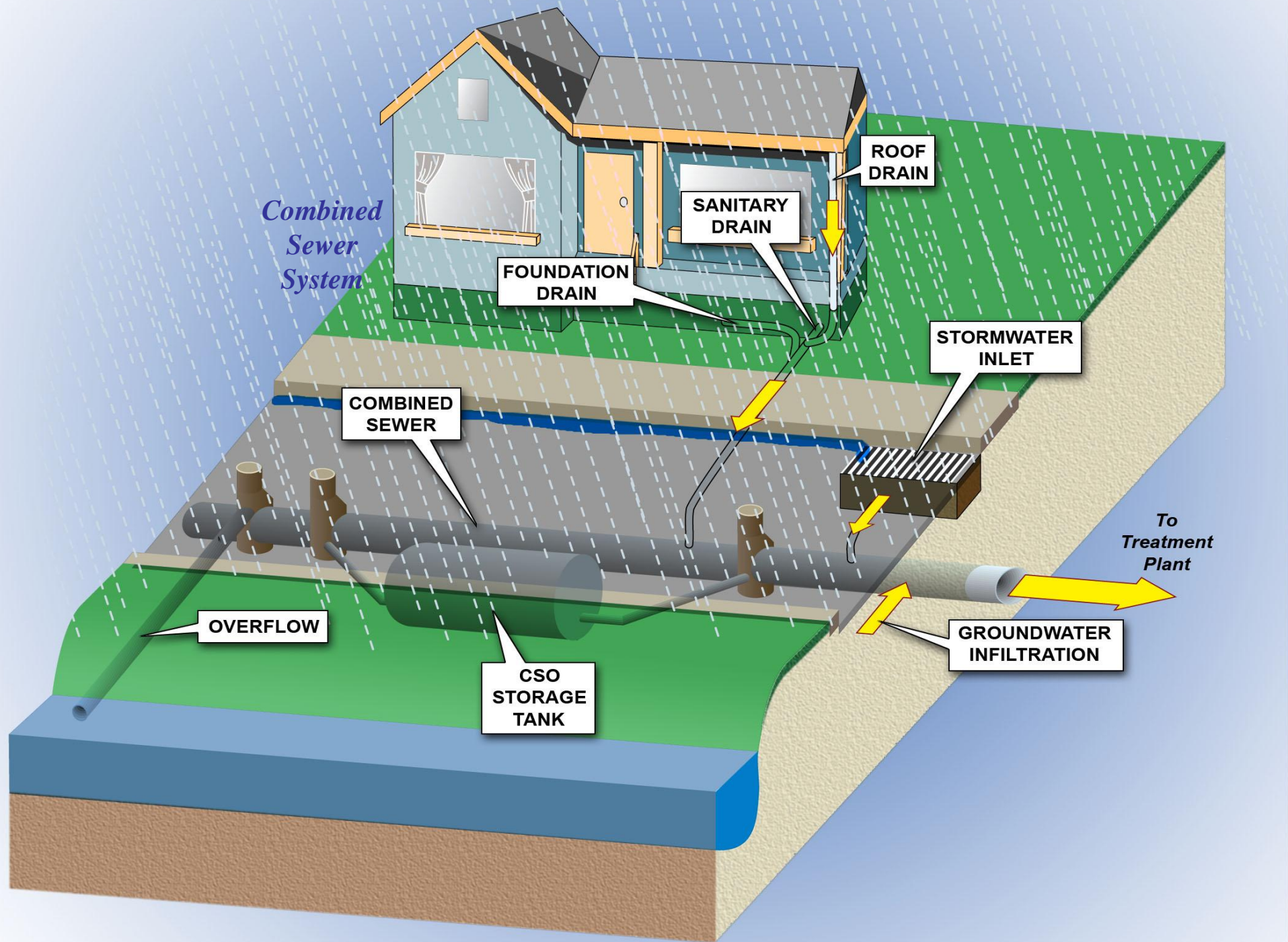
What is a Combined Sewer Overflow?



💧 *Wastewater* (from homes) and *stormwater* (from rooftops, streets) flow in a single pipe - a “combined sewer.”



💧 During heavy rains, stormwater (~90%) and sewage (~10%) exceed the system, causing a combined sewer overflow (CSO) into nearest waterway.



Combined Sewer Overflows (CSOs)

- 90 permitted CSO outfalls
- 100 million gallons CSO discharge annually
- About 200 CSO discharge events annually



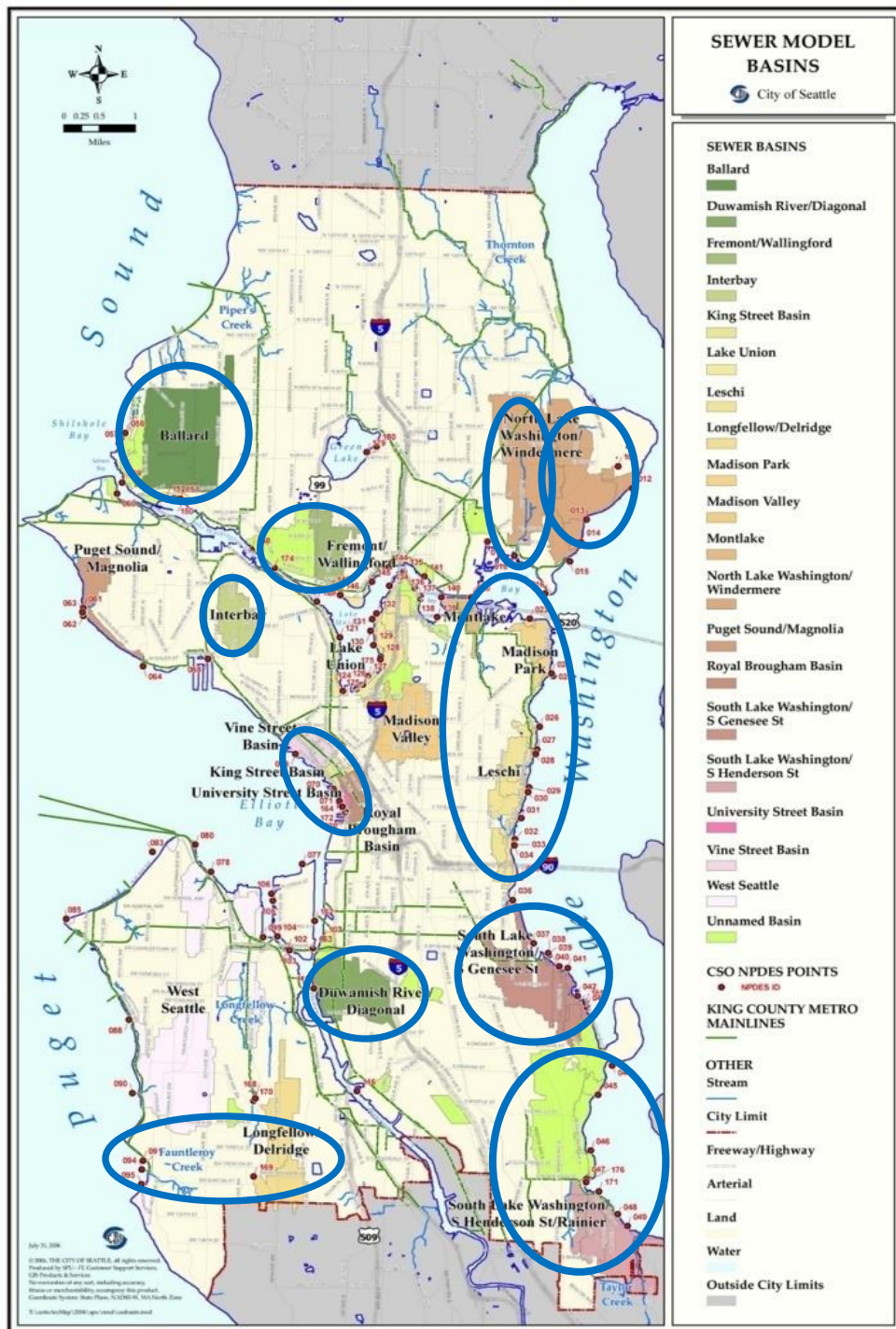
CSO Reduction Program Goals

- 💧 Comply with Clean Water Act, state/federal regulations
- 💧 Improve water quality
- 💧 Finish historic effort
- 💧 Minimize rate impacts
- 💧 Partner for cost-effective solutions

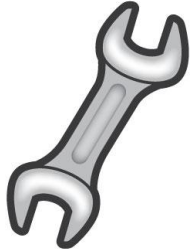


Focus on Next 5 Years

- 💧 Improve existing system through retrofits
- 💧 Construct CSO reduction projects
 - 💧 Windermere, Genesee, and Henderson basins
- 💧 Pilot green infrastructure projects
- 💧 Complete Long-term Control Plan



CSO Reduction Solutions



Retrofits

Optimize
and repair
existing
system.



Green

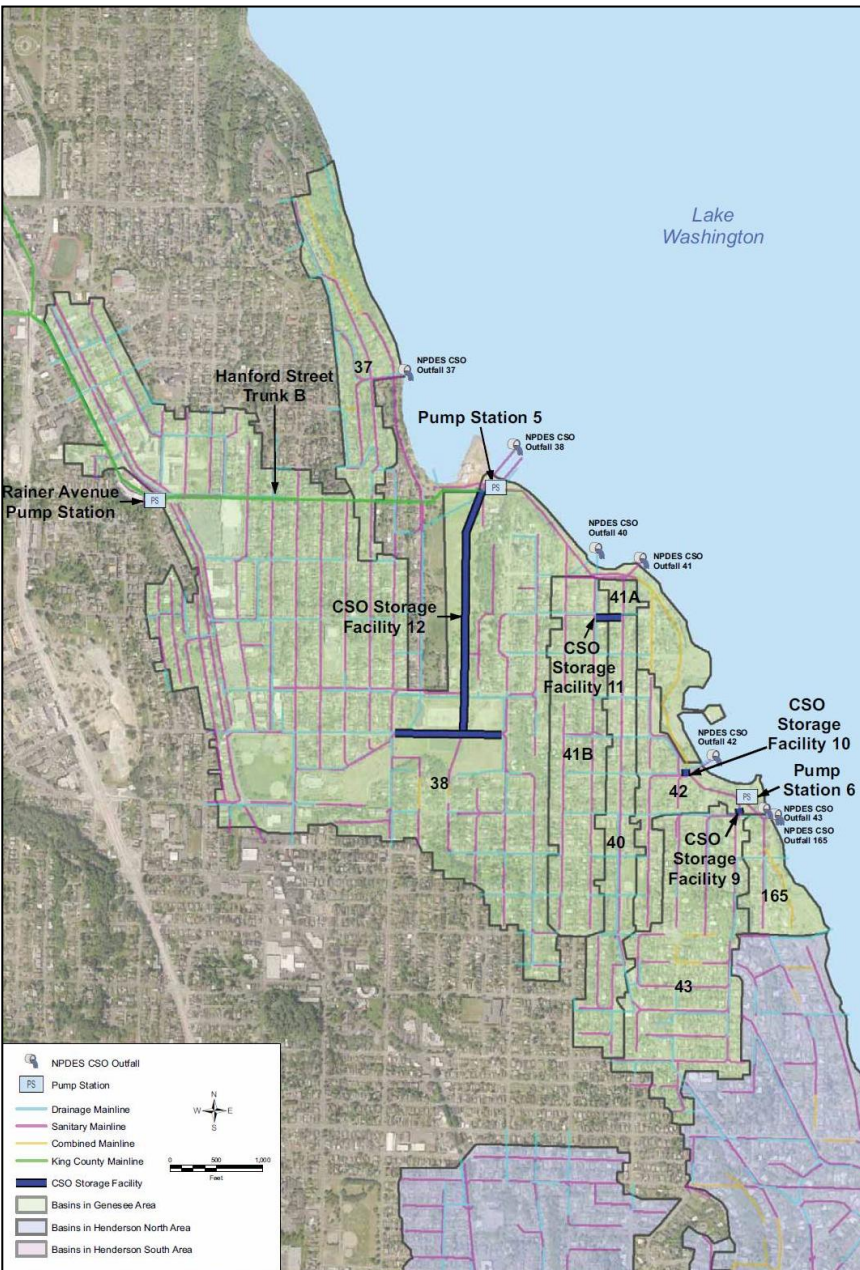
Increase holding
capacity of soil
and slow the
flow.



Storage

Increase
capacity of
underground
pipes and
tanks.

Genesee CSO Reduction Project



- 💧 Top Priority Basin
- 💧 700 Acres
- 💧 Construction 2013-2015
- 💧 Reduces CSOs from 10 times to 1 time per year
- 💧 Storage Volumes:
 - 💧 Basins 40/41: 430,000 gal
 - 💧 Basin 43: 190,000 gal



Retrofits

- Basin 40/41 – 2 Outfall weir repairs completed
- Basin 38 – Repair weir to utilize existing storage
- **Basin 41 – Repair or replace outfall pipe that is damaged.**



Basin 41
Sept. – Oct.
2010
Construction



Green Stormwater Infrastructure (GSI)



- National leader in GSI
- Allows stormwater to slowly filter into ground, keeping it out of sewer system
- Incentives for property owners to install rain gardens & cisterns

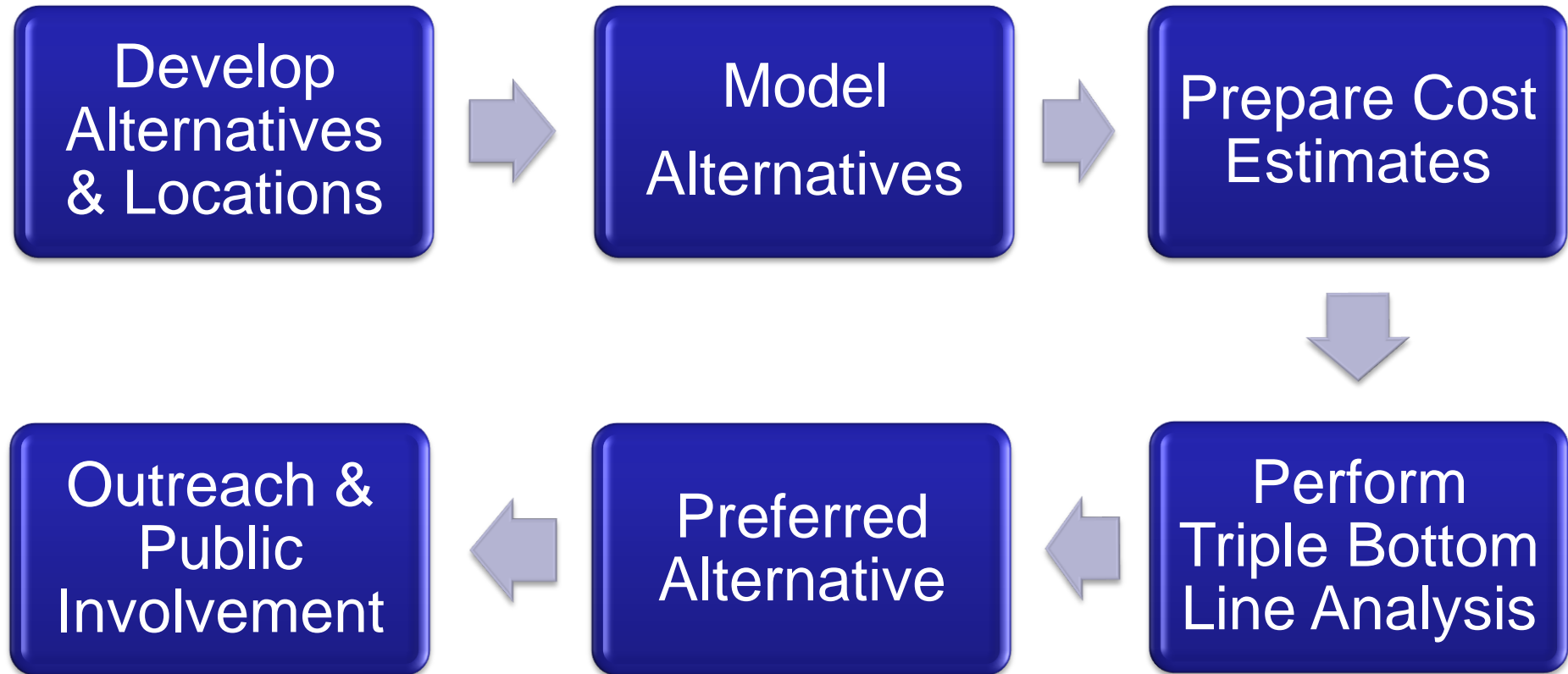


www.rainwise.seattle.gov

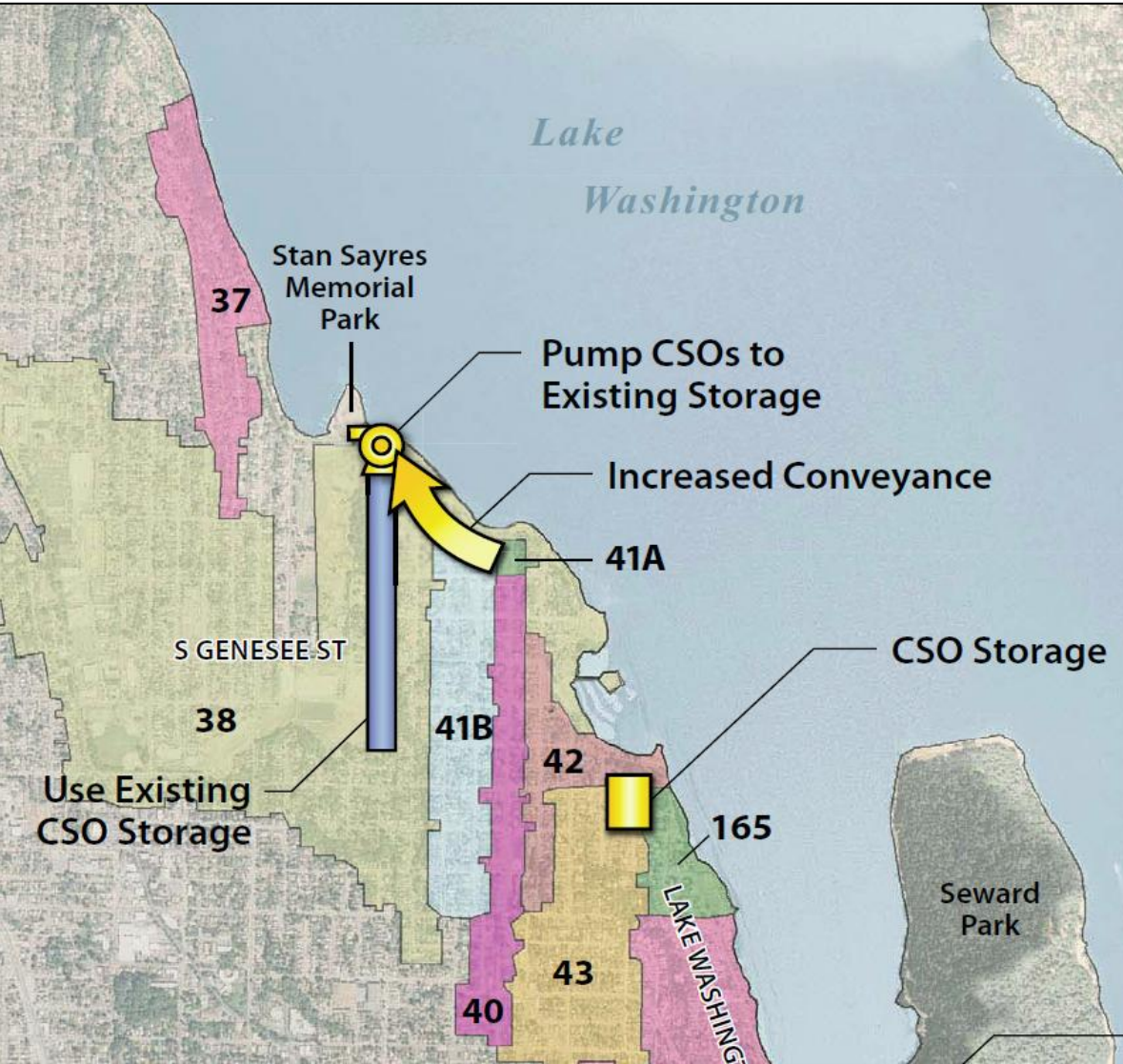
Green Stormwater Infrastructure (GSI)

- 💧 **Genesee Area - Partially Separated**
- 💧 **Roadside rain gardens and green alleys less effective in Genesee**
- 💧 **RainWise more effective in Genesee**
- 💧 **Eligible between 2012 - 2015**

Genesee CSO Reduction Screening Process



Genesee Alternative #1: Pipe, Pump and Store



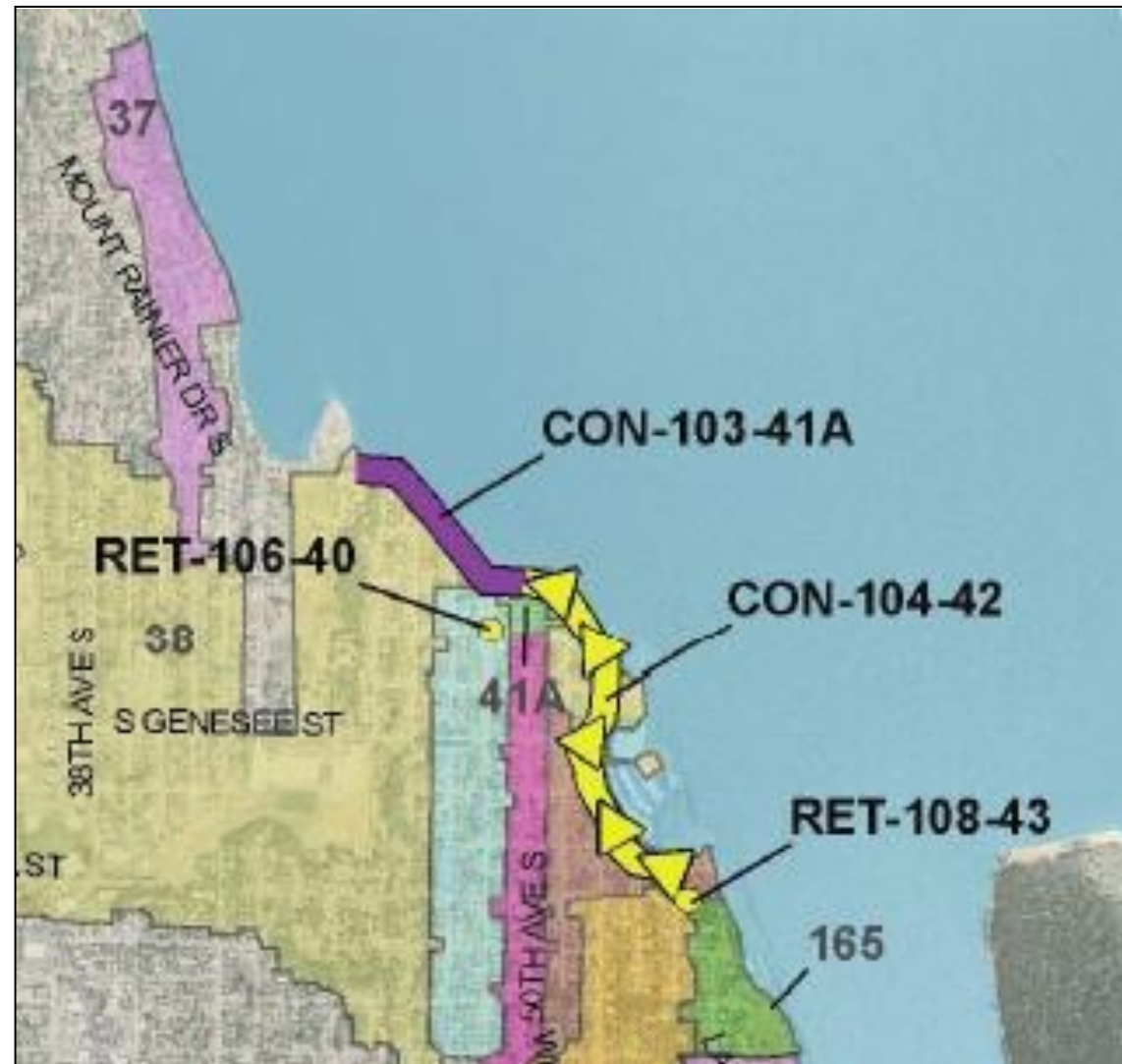
Includes:

- Pipeline under Lake Washington Blvd
- New pump station near Stan Sayres Park
- Enlarging existing storage facility on S. Alaska St.

Genesee Alternative #2: Storage Under Street

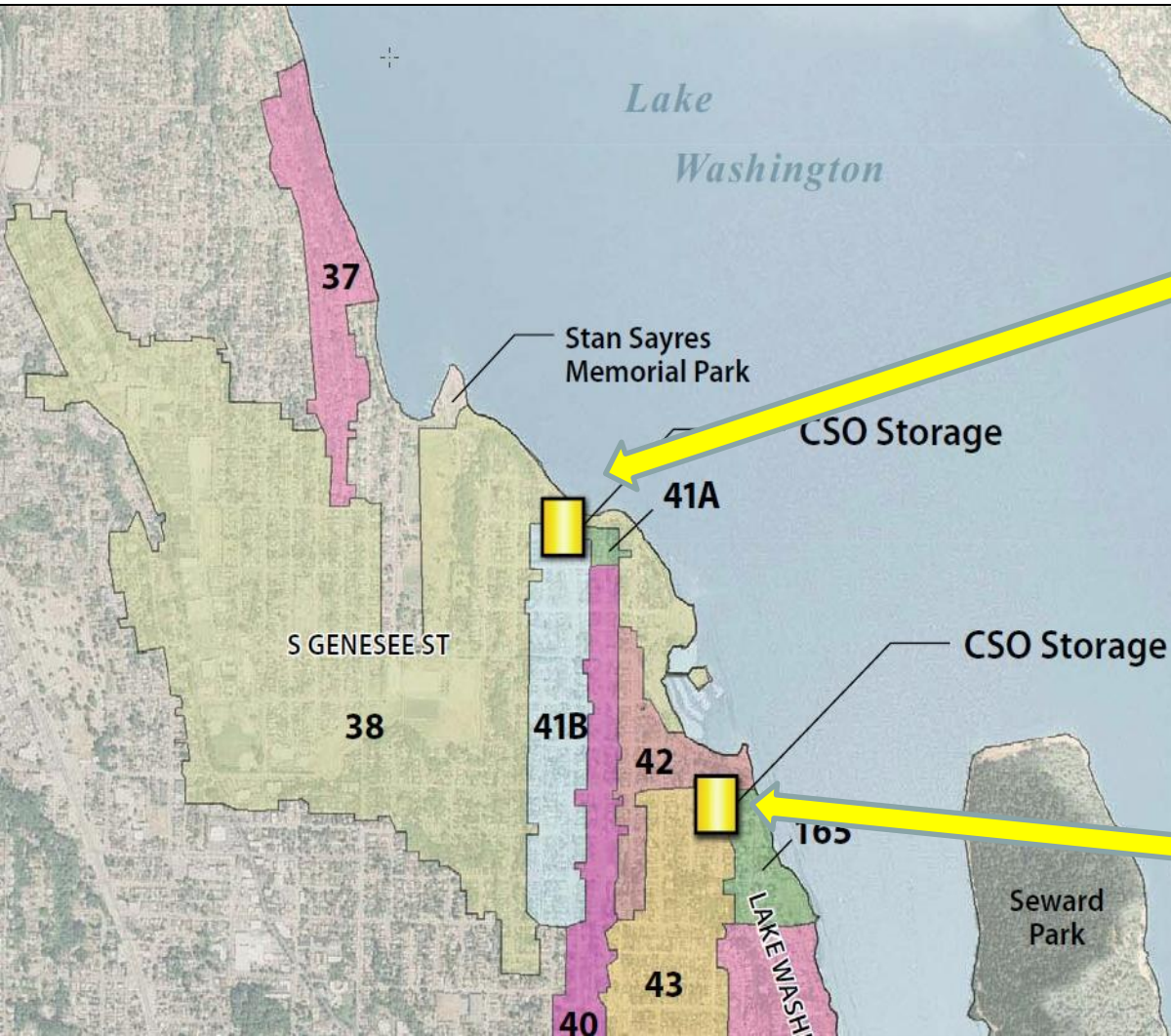
Includes:

- Storage in-line with pipeline under Lake Washington Blvd
- Project would require 15-foot-wide excavation down middle of street



Genesee Basin Alternative #3: Distributed Storage (Recommended)

a) Storage in Triangle Parking Lot



b) Storage along S. Alaska St



Genesee Alternative #3a: Distributed Storage (Recommended)



Storage in Triangle Parking Lot

Capacity: Approx. 430,000 gallons

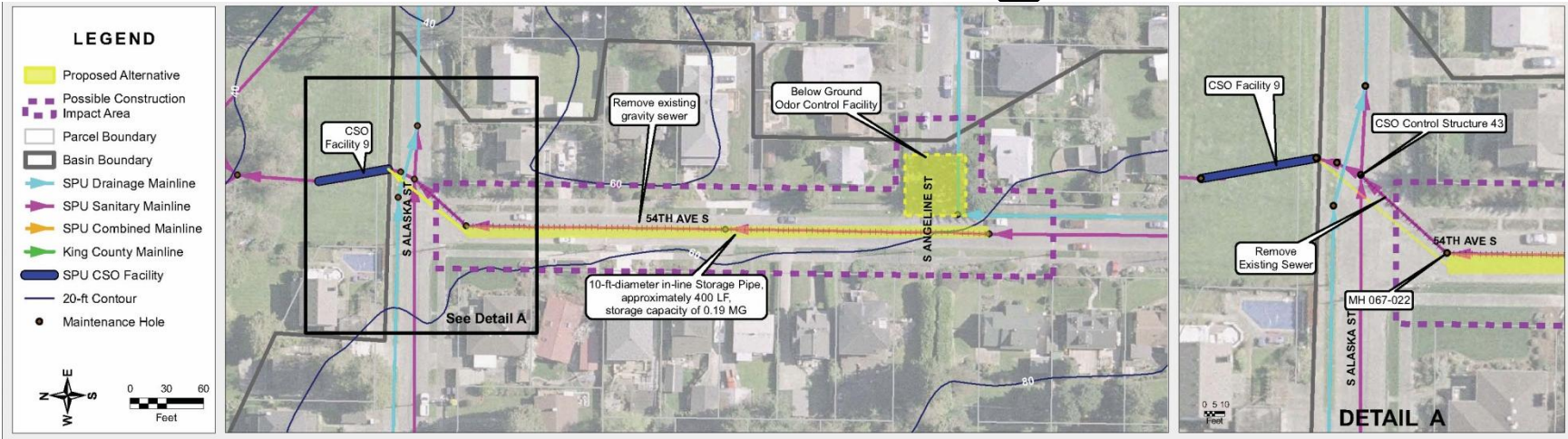
Rendering of Concept



Storage in Triangle Parking Lot

Capacity: Approx. 430,000 gallons

Genesee Alternative for #3b: In-line Storage



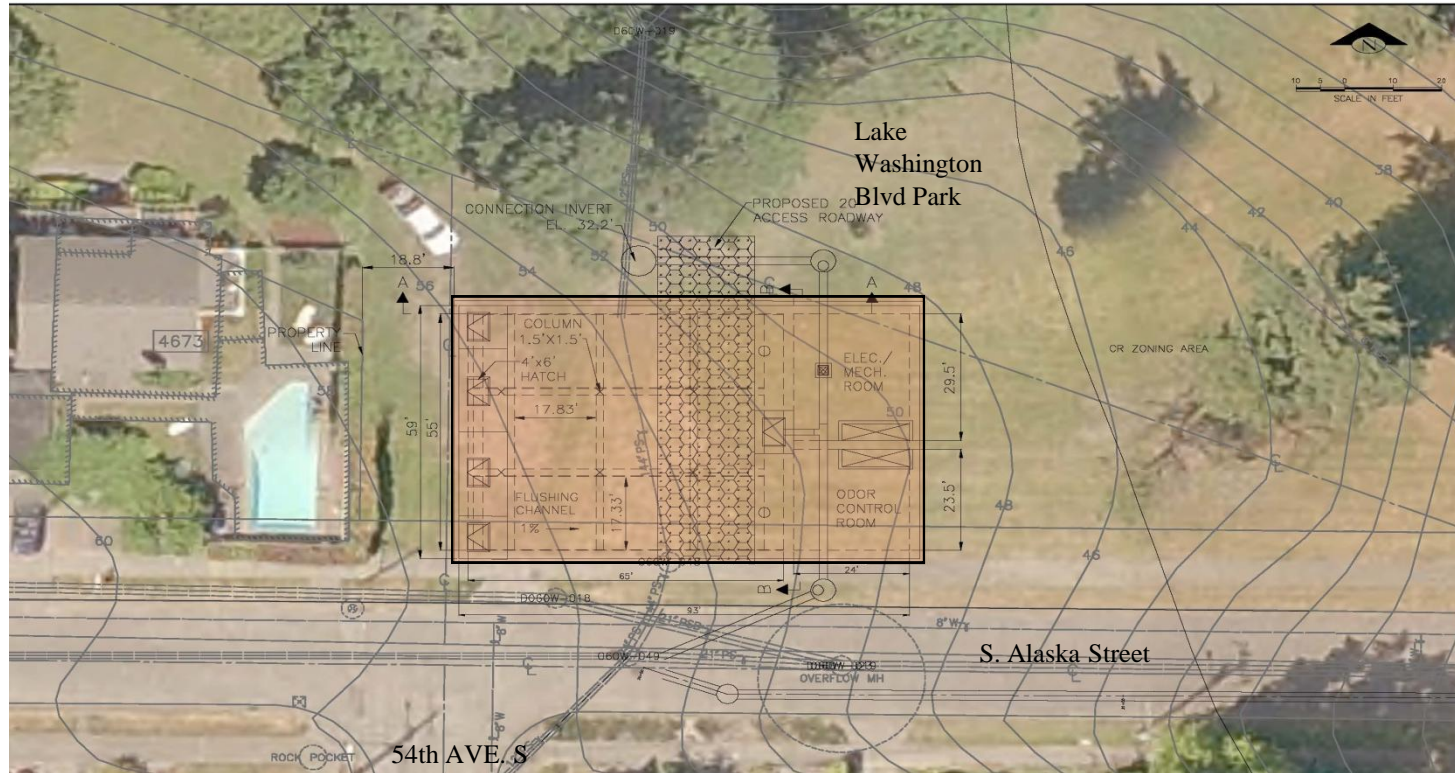
Add in-line storage and odor control in 54th Ave.

- Costly to construct
- Space constraints
- Street closed during construction/ significant impacts to residents



Looking south down 54th Ave S
from S. Alaska Street

Genesee Alternative #3b: Distributed Storage (Recommended)



Expand existing storage in Park near S. Alaska St.
Capacity: Approx. 270,000 gallons

Rendering of Concept



Expand existing storage in Park near S. Alaska St.

Capacity: Approx. 270,000 gallons

Common Concerns

- 💧 Traffic & Park Access
 - 💧 Workplace Expectations
 - 💧 Parking
 - 💧 Noise
 - 💧 Odors
 - 💧 Maintenance
 - 💧 Structural Integrity
 - 💧 Site Restoration
- 💧 Expectations around community events:
 - 💧 Seafair
 - 💧 Furry 5K
 - 💧 Bicycle Sundays
 - 💧 Live Strong Challenge
 - 💧 Danskin Triathlon
 - 💧 STP
- Others?

Odor Control During Operation

- 💧 Buried odor control in vaults
- 💧 Odor system operates year round
- 💧 Carbon-based air scrubber
- 💧 Vent designed to blend with other site features



Maintenance Requirements

- 💧 Routine inspection (1 day/month)
- 💧 Event inspection (2-3 times/year)
- 💧 Regular equipment inspection – truck or van
- 💧 Cleaning (2-3 days every 1 to 5 years)
- 💧 Cleaning Equipment – vactor truck or crane



Structural Integrity

- 💧 Earthquake design standards
- 💧 Structural inspection after an earthquake
- 💧 Tanks will fill a few times per year on average



Project Progress

- 💧 Engineering Activities - ongoing
- 💧 Land surveying (*completed for Basin 40/41*)
- 💧 Preliminary geotechnical study (*completed*)
- 💧 Historical/cultural research (*completed*)
- 💧 Environmental review - underway
- 💧 Continued public outreach - ongoing

Preliminary Project Schedule

[illegible]

Project Outreach

Presentations and briefings to community:

- ✓ **June 7** - Mt. Baker Community Club
- ✓ **June 23** - Southeast District Council
- ✓ **August 21** - On-site Question & Answer sessions
- ✓ **August 26** - Genesee Park Neighbors Association
- ✓ **Sept. 14** - Lakewood/Seward Park Community Association
- ✓ **Sept. 21 – Public Meeting**
- Suggestions?

On-going Project Communications

- ❑ Additional Public Meetings in 2011
- ❑ SPU will send out project updates through the e-mail distribution list (list-serv)
- ❑ Presentations, project updates, and other information will be posted to the project website (www.seattle.gov/cso)
- ❑ You can send emails directly to the project team (SPU_GCSO@Seattle.gov)
- ❑ You can call and leave a message for the project team (206-826-4767)

Contact Information

SPU_GCSO@Seattle.gov

206-826-4767

www.seattle.gov/CSO

If you would like to be included on the project email list – sign up in back, or send an email to SPU_GCSO@Seattle.gov with "distribution list" in the subject line.